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Young-Chan Kim

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EXAMINER

YANG, RYAN R

ART UNIT

PAPER NUMBER

2628

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/775,058	Applicant(s) KIM, YOUNG-CHAN	
	Examiner Ryan R. Yang	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-19 is/are allowed.
- 6) ☒ Claim(s) 20-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Reissue Applications

1. This action is responsive to communications: Remarks, filed on 5/2/2006.

This action is final.

2. Claims 1-46 are pending in this application. Claims 1, 5, 13, 20, 33-36, 39, 40, 42, 45, 47, 49, 50, 52, 55, 57 and 59 are independent claims. In the Amendment, filed on 5/2/2006, claims 20, 23, 26, 28, 30, 33-37, 38-40, 42-46 were amended, and claims 47-69 were added.

3. This application is a reissue application of Application No. 09/412,745 filed 10/5/1999, which has Foreign Priority dated 5/26/1999, which is now Patent No. 6,346,972.

4. The present title of the invention is "Video display apparatus with on-screen display pivoting function" as filed originally.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 34-41, 45-54, 56 and 64-69 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims 34 and 39-41 limitations “displaying a second image that is received from a device external to the video display apparatus on the screen; modifying OSD data corresponding to the first image including the OSD with respect to a position of the rotatable screen when the screen is rotated; and displaying the first image that corresponds to the modified OSD data on the second image displayed on the rotatable screen”, this feature is not disclosed in the specifications.

The claims 35, 45 and 46 limitation “display the OSD image containing information about operation of the screen body at a rotated position in accordance with the mode signal” is not disclosed in the specifications.

The claims 36-38 limitation “OSD window” is not disclosed in the specification.

The claims 47-51, 52-54 and 56 language contains “function keys” of the display unit or “screen function keys”, these features are not described in the specifications.

The claims 64-66 language contains “a control window”, this feature is not discloses in the specifications.

The claims 67-69 language claims OSD indicates screen viewing settings comprising “at least one of a brightness of a screen picture affecting the displayed second image and a size of the screen picture affecting the displayed second image”, this feature is not discloses in the specifications.

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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7. Claims 20-29, 32-33 and 47-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Register (5,661,632).

As per Claim 20, Register discloses a method of displaying an on-screen display (OSD) in a video display apparatus having a rotatable screen body, the method comprising:

generating a mode signal indicating a rotated state of the screen body (Figure 1, item 34 is a toggle switch generating signals indicating a rotated state of the screen body); and

displaying the OSD image containing information about operation of the screen at a rotated position in accordance with the mode signal (Figures 4 and 5 display image according rotated state of the OSD and the alignment of 54a and 54b with "upright" icon orientations (column 3, line 42-43) indicate different modes of operation).

8. As per Claim 21, Register demonstrated all the elements as disclosed in the rejected claim 20, and further discloses the mode signal is generated in accordance with a user input indicating the rotated state of the screen body (Figure 2, button 34 is user input).

9. As per Claim 22, Register demonstrated all the elements as disclosed in the rejected claim 21, and further discloses wherein the user input is made by a direct key selection (Figure 2, button 34 can be directly selected).

10. As per Claim 23, Register demonstrated all the elements as disclosed in the rejected claim 20, and further discloses comprising:

rotating the OSD in accordance with the mode signal (Figures 4 and 5 shows rotated state in accordance with the mode signal).

11. As per Claim 24, Register demonstrated all the elements as disclosed in the rejected claim 23, and further discloses the mode signal is generated in accordance with a user input indicating the rotated state of the screen body (Figure 2, button 34 is user input).

12. As per Claim 25, Register demonstrated all the elements as disclosed in the rejected claim 23, and further discloses the user input is made by a direct key selection (Figure 2, button 34 can be directly selected).

13. As per Claim 26, Register demonstrated all the elements as disclosed in the rejected claim 23, and further discloses the OSD image rotating operation comprises reordering read sequence of the OSD data which is stored in a data memory ("The subroutine then arranges the data patterns within the memory 104 such that the video controller 106 displays the data on the display screen 108 in an orientation that is rotated ninety degrees", column 5, line 13-16).

14. As per Claim 27, Register demonstrated all the elements as disclosed in the rejected claim 26, and further discloses the reordering operation is made to form characters and/or symbols represented by the OSD data in a perpendicularly rotated manner ("a display screen image 52 that may comprise text and/or graphics", column 3, line 24-25).

15. As per Claim 28, Register demonstrated all the elements as disclosed in the rejected claim 23, and further discloses the OSD image rotating operation comprises

reordering read addresses of the OSD data which is stored in a data memory (“The subroutine then arranges the data patterns within the memory 104 such that the video controller 106 displays the data on the display screen 108 in an orientation that is rotated ninety degrees”, column 5, line 13-16).

16. As per Claim 29, Register demonstrated all the elements as disclosed in the rejected claim 28, and further discloses the reordering operation is made to form characters and/or symbols represented by the OSD data in a perpendicularly rotated manner (“The subroutine then arranges the data patterns within the memory 104 such that the video controller 106 displays the data on the display screen 108 in an orientation that is rotated ninety degrees”, column 5, line 13-16).

17. As per Claim 32, Register demonstrated all the elements as disclosed in the rejected claim 20, and further discloses the generating operation comprises:

activating a key located on the Rotatable screen body (Figure 4, key 34).

18. As per Claim 33, Register discloses a method of displaying an on-screen display (OSD) window in a video display apparatus having a rotatable screen body, the method comprising:

generating a mode control signal to indicate a desired display position of the OSD window on the rotatable screen body (Figure 1, item 34 is a toggle switch generating signals indicating a desired rotated state of the screen body); and

displaying the OSD window at the desired display position on the rotatable screen body according to the generated mode control signal, wherein the OSD window indicates attributes or functional information about an operational state of the screen

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body (Figures 4 and 5 display image according to rotated state of the OSD and the alignment of 54a and 54b in relation to "upright" icon orientations (column 3, line 42-43) indicate different modes of operation).

19. As per claim 47, Register discloses a method of displaying an on-screen display (OSD) in a video display apparatus having a rotatable screen body associated with one or more screen function keys that are selectable to change an operational state of the screen body, the method comprising:

receiving a selection of the one or more screen function keys while the screen body is powered on ("the CPU 100 determines whether the I/O-1 interrupt line 122 has changed states. A change in state in this interrupt line may occur when, for example, the upper end 34a of the toggle button 34 is depressed", column 4, line 42-46, where the toggle switches are the function keys);

generating a mode signal indicating a rotated state of the screen body in response to a rotation of the screen body (where the toggle buttons generate signals indicate rotated state of the screen body); and

displaying the OSD in response to the selection of the one or more screen function keys such that the OSD is displayed at a rotated position when the mode signal is generated (Figure 4 and 5 display image according rotated state of the OSD).

20. As per claim 48, Register demonstrated all the elements as disclosed in the rejected claim 47, and further discloses the one or more screen function keys are disposed on the screen body, and the OSD includes information about a current operational state of the screen body (Figures 4 and 5 with function keys 34a and 34b

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display image according rotated state of the OSD and the alignment of 54a and 54b with "upright" icon orientations (column 3, line 42-43) indicate operation states of the screen body).

21. As per claim 49, Register discloses a video display apparatus, comprising:

a rotatable screen having one or more screen function keys that are selectable to change an operational state of the screen when the screen is powered on ("A change in state in this interrupt line may occur when, for example, the upper end 34a of the toggle button 34 is depressed", column 4, line 44-46, where the toggle switches are the function keys); and

an on-screen display unit to control the screen to display an on-screen display (OSD) in response to a selection of the one or more screen function keys on the screen, to receive a mode control signal indicating a rotated state of the screen when the screen is rotated (Figure 4, 54a and 54b are the function keys selecting the display mode where the toggle buttons generate signals indicate rotated state of the screen body), and to modify OSD data corresponding to the OSD with respect to the rotatable screen according to the mode control signal such that the screen displays the modified OSD data (Figure 4 and Figure 5 show modified OSD according to rotated state).

22. As per claim 50, Register discloses a video display apparatus, comprising:

a screen having one or more function keys associated therewith and being rotatable between a first screen orientation and a second screen orientation (Figure 4, 54a and 54b are the function keys selecting the display mode and Figure 4 shows a first orientation and Figure 5 shows a second orientation), and

an on-screen display unit to display an on-screen display (OSD) in response to a selection of the one or more function keys when the screen is powered on, wherein the OSD is displayed in a first OSD orientation when the screen is in the corresponding first screen orientation and is displayed in a second OSD orientation when the screen is in the corresponding second screen orientation (Figure 4 and 5 and “the orientation of the display screen image 56 and the command text and/or graphics C may e also switched back to their FIG. 4 portrait orientation using the toggle button 34”, column 4, line 10-13).

23. As per claim 51, Register demonstrated all the elements as disclosed in the rejected claim 47, and further discloses:

an outer panel surrounding the screen and having the one or more function keys disposed thereon, and the OSD includes information about a current operational state of the screen (Figure 4, item 14 is the outer panel, 34a and 34b are the function keys; and Figures 4 and 5 display image according rotated state of the OSD and the alignment of 54a and 54b with “upright” icons orientations (column 3, line 42-43) indicate different modes of operation).

24. Claims 34-41, 45-46, 52-53, 55-63 and 67-69 are rejected under 35 U.S.C. 102(b) as being anticipated by Kishimoto et al. (5,134,390)

As per Claim 34, Kishimoto et al., hereinafter Kishimoto, discloses a method of displaying a first image including an on-screen display (OSD) in a video display apparatus having a screen and a rotatable screen body, the method comprising:

displaying a second image that is received from a device external to the video display apparatus on the screen ("An image input unit 4, e.g., an image scanner, reads image information on a medium in the form of binary signals", column 3, line 30-32, where the image scanner receives image from external);

modifying OSD data corresponding to the first image including the OSD with respect to a position of the rotatable screen when the screen is rotated (FIG. 6, "an image 65 of the image data is displayed on the screen at the same position, while the display 11 is physically rotated by 90 degrees. In contrast, character information 61 of the character data 60 is displayed on the display screen 63 at an equal magnification factor to the character information 64, where it is displayed on the display screen 67 at a greater magnification factor after rotated by 90 degrees in the memory", column 5, line 57-66, where 63 and 67 show modified image from 60 and the character is considered as character image); and

displaying the first image that corresponds to the modified OSD data on the second image displayed on rotatable screen (Figure 1, item 11 and Figure 6 is a modified first image on a second image).

25. As per Claim 35, Kishimoto discloses a video display apparatus having a screen body to display an on- screen display (OSD) image, the video display apparatus comprising:

a controller to generate a mode signal indicating a rotated state of the screen body (Figure 1, item 9; "The end position detection circuit 903 supplies display rotary position information 903 to the main control unit ... in accordance with the position

detection signals 117a and 118a supplied from the rotary position detection switches 117 and 118", column 5, line 21-27); and

a circuit unit to display the OSD image containing information about operation of the screen body at a rotated position in accordance with the mode signal (Figure 7 is a circuit unit; Figure 6 shows a rotated state; the portrait mode or landscape mode inherently tells the operation of the screen body).

26. As per Claim 36, Kishimoto discloses a video display apparatus having a rotatable screen body to display an on-screen display (OSD) window indicating attribute or functional information about an operation state of the screen body, the video display apparatus comprising:

a control unit to generate a mode control signal to indicate a desired display position of the OSD window on the rotatable screen body (Figure 1, item 9; "The end position detection circuit 903 supplies display rotary position information 903 to the main control unit ... in accordance with the position detection signals 117a and 118a supplied from the rotary position detection switches 117 and 118", column 5, line 21-27); and

a circuit to display the OSD window at the desired display position on the rotatable screen body according to the generated mode control signal (Figure 7; Figure 6 shows a rotated state).

27. As per Claim 37, Kishimoto demonstrated all the elements as disclosed in the rejected claim 36, and further discloses the circuit comprises:

a reading unit to read OSD data contained in the OSD window as first OSD data (Figure 7, item 78); and

a modifying unit to modify the first OSD data as second OSD data according to the generated mode signal (Figure 7, item 79).

28. As per Claim 38, Kishimoto demonstrated all the elements as disclosed in the rejected claim 37, and further discloses the circuit comprises:

a storing unit storing a write address of the first OSD data in a predetermined format that corresponds to the rotated position of the screen body (Figure 7, item 77).

29. As per Claim 39, Kishimoto discloses a video display apparatus having a rotatable screen to display a first image including an on-screen display (OSD) and to display a second image received from a device that is external to the video display apparatus, the video display apparatus, comprising:

a circuit unit to modify OSD data corresponding to the first image including the OSD with respect to the rotatable screen when the screen is rotated (FIG. 6, "an image 65 of the image data is displayed on the screen at the same position, while the display 11 is physically rotated by 90 degrees. In contrast, character information 61 of the character data 60 is displayed on the display screen 63 at an equal magnification factor to the character information 64, where it is displayed on the display screen 67 at a greater magnification factor after rotated by 90 degrees in the memory", column 5, line 57-66, where 63 and 67 show modified image from 60 and Figure 7 is the modifying circuit); and

an on-screen display unit to display the first image corresponding to the modified OSD data on the second image displayed on the screen (Figure 1, item 11 and Figure 6 is a modified first image on a second image).

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30. As per Claim 40, Kishimoto discloses a method of displaying a first image including an on-screen display (OSD) in a video display apparatus having a rotatable screen, the method comprising:

displaying a second image that is received from a device external to the video display apparatus ("An image input unit 4, e.g., an image scanner, reads image information on a medium in the form of binary signals", column 3, line 30-32, where the image scanner receives image from external);

modifying OSD data corresponding to the first image including the OSD with respect to an angle of rotation of the screen when the screen is rotated (FIG. 6, "an image 65 of the image data is displayed on the screen at the same position, while the display 11 is physically rotated by 90 degrees. In contrast, character information 61 of the character data 60 is displayed on the display screen 63 at an equal magnification factor to the character information 64, where it is displayed on the display screen 67 at a greater magnification factor after rotated by 90 degrees in the memory", column 5, line 57-66, where 63 and 67 show modified image from 60 and the character is considered as character image); and

displaying the first image corresponding to the modified OSD data on the second image displayed on the rotated screen (Figure 1, item 11 and Figure 6 is a modified first image on a second image).

31. As per claim 41, Kishimoto demonstrated all the elements as disclosed in the rejected claim 40, and further discloses the angle of rotation of the screen is obtained by

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rotating the screen in the clockwise or counterclockwise directions (Figure 2 where the rotary shaft 115a can be rotated clockwise or counterclockwise).

32. As per claim 45, Kishimoto discloses an apparatus generating an OSD to be displayed on a screen body of a display apparatus, comprising:

a circuit unit to modify the OSD image containing information about operation of the screen body (Figure 7 is a circuit) and to selectively generate one of the OSD image and the modified OSD image according to a signal representing a rotation state of the screen body ("A character code sent via the character code bus 800 is temporarily stored in a latch (LT)", column 6, line 16-17; "A rotation control unit 76 outputs the data stored in the rotation buffer 75 through conversion of the memory storage addresses so as to display the data on the display by rotating the character codes by 90 degrees", column 6, line 23-26).

33. As per claim 46, Kishimoto demonstrated all the elements as disclosed in the rejected claim 45, and further discloses the circuit unit reads first data corresponding to the OSD display in a predetermined manner to generate second data corresponding to the modified OSD ("A readout circuit 78 reads at a predetermined timing, in accordance with a signal in the control signal group 900 supplied from the main control unit 1, character data from the character bit map memory (BMM) 77, to thereby determine the display position for the character code on the display", column 6, line 34-39).

34. As per claim 52, Kishimoto discloses a video display apparatus having a rotatable display unit, the video display apparatus comprising:

an external signal unit to receive an external image signal (Figure 1, item 4);

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an OSD generator to generate an internal OSD image signal (Figure 1, item 8),
a control unit to generate a mode signal indicating a rotated state of the display unit (Figure 1, item 9); and

a circuit unit to drive the display unit to display the external image signal and to drive the display unit to display the internal OSD image signal at a rotated position in accordance with the mode signal generated by the control unit (Figure 1, item 10).

35. As per claim 53, Kishimoto demonstrated all the elements as disclosed in the rejected claim 52, and further discloses:

one or more function keys to change operation settings thereof such that the circuit unit drives the display unit to display the internal OSD image signal in response to a selection of the one or more function keys (Figure 12; "it is checked if the operator has instructed to rotate the display device 112 by means of the keyboard 2 or a predetermined switch (not shown) (step1201)", column 8, line 20-22).

36. As per claim 55, Kishimoto discloses a method of controlling a video display apparatus having a rotatable display unit, the method comprising:

receiving an external image signal (Figure 1, item 4);

generating an internal OSD image signal, generating a mode signal indicating a rotated state of the display unit (Figure 12, item 1201; "If a rotation command is detected, the main control unit 1 supplies the actuation command S to the display rotation control unit 9", column 8, line 22-24); and

driving the display unit to display the received external image signal and driving the display unit to display the generated internal OSD image signal at a rotated position

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in accordance with the generated mode signal (Figure 4, item 10 and Figure 12, step 1206).

37. As per claim 56, Kishimoto demonstrated all the elements as disclosed in the rejected claim 55, and further discloses:

enabling selection of one or more function keys of the display unit to change operation settings thereof such that the display unit is driven to display the generated internal OSD image signal in response to a selection of the one or more function keys ("If a rotation command is detected, the main control unit 1 supplies the actuation command S to the display rotation control unit 9", column 8, line 22-24; and "the image display control unit 8 performs a set of rotation operations described above to automatically change the image layout", column 8, line 65-69).

38. As per claim 57, Kishimoto discloses a video display apparatus having a rotatable display unit, the video display apparatus comprising:

an OSD generator to generate an internal OSD image signal (Figure 1, item 8);
a control unit to generate a mode signal indicating a rotated state of the display unit (Figure 1, item 9); and

a circuit unit to drive the display unit to display the internal OSD image signal at a rotated position in accordance with the mode signal generated by the control unit (Figure 1, item 10).

39. As per claim 58, Kishimoto demonstrated all the elements as disclosed in the rejected claim 57, and further discloses:

an external signal unit to receive an external image signal such that the circuit unit further drives the display unit to display the external image signal with the internal OSD image signal (Figure 1, item 4 is an external signal unit, and Figure 1, item provides internal OSD image signal).

40. As per claim 59, Kishimoto discloses a method of controlling a video display apparatus having a rotatable display unit, the method comprising steps similar to claim 57 limitations, therefore is similarly rejected as claim 57.

41. As per claim 60, Kishimoto demonstrated all the elements as disclosed in the rejected claim 59, and further discloses the steps similar to claim 58 limitations, therefore is similarly rejected as claim 58.

42. As per claim 61, Kishimoto demonstrated all the elements as disclosed in the rejected claim 34, and further discloses wherein the displaying of the first image that corresponds to the modified OSD data on the second image displayed on the rotatable screen comprises displaying the first image in a center of the rotatable screen ("FIG. 6, an image 65 of the image data is displayed on the screen at the same position, while the display 11 physically rotated by 90 degrees", column 5, line 57-59, for the image to remain at the same position after rotation, the image is inherently at the center of the display).

43. As per claims 62 and 63, Kishimoto demonstrated all the elements as disclosed in the rejected claims 39 and 40, respectively, and further discloses the limitation similar to claim 61, therefore are similarly rejected as claim 61.

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44. As per claims 67-69, Kishimoto demonstrated all the elements as disclosed in the rejected claims 34, 39 and 40, *supra*, respectively, and further discloses the first image including the OSD indicates screen viewing settings comprising at least one of a brightness of a screen picture affecting the displayed second image and a size of the screen picture affecting the displayed second image ("The character data are superposed on the image 65 after being converted to a predetermined position and magnification factor, in according with a display mode defining the shape and dimension of a display area", column 6, line 2-6).

45. Claims 42 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto et al. (5,329,289).

As per claim 42, Sakamoto discloses a method of generating an OSD to be displayed on a screen body of a display apparatus, the method comprising:

modifying the OSD image containing information about operation of the screen body (Figure 14 is a modifying process); and

selectively generating one of the OSD and the modified OSD according to a signal representing a rotation state of the screen body (Figure 14, item S23 is a selection step).

46. As per claim 43, Sakamoto demonstrated all the elements as disclosed in the rejected claim 42, and further discloses:

displaying the modified OSD image on the screen body according to the signal representing the rotation state of the screen body (Figure 14, item S24).

Claim Rejections - 35 USC § 103

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47. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Register (5,661,632) and further in view of Sakamoto et al. (5,329,289).

48. As per Claim 30, Register demonstrated all the elements as disclosed in the rejected claim 20.

Register discloses a dual mode display screen. It is noted that Register does not explicitly disclose reading OSD data contained in the OSD image as first OSD data and modifying the first OSD data as second OSD data according to the generated mode signal, however, this is known in the art as taught by Sakamoto et al., hereinafter Sakamoto. Sakamoto discloses

reading OSD data contained in the OSD image as first OSD data ("data on an onscreen display stored in the display status storing region in the RAM 11b is read through the CPU 10 in the initialization routine stored in the ROM 11a (S2)", column 4, line 52-55); and

modifying the first OSD data as second OSD data according to the generated mode signal ("If it is recognized as the vertically elongated screen, a command is accordingly sent through the CPU 10 to the display controller 16 to set a vertically elongated on-screen format to the display unit 3 (S4)", column 4, line 58-62).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teach of Sakamoto into Register discloses a method of display dual mode image and Sakamoto discloses the generated image could be modified in order for it to be displayed in different mode.

49. As per Claim 31, Register and Sakamoto demonstrated all the elements as disclosed in the rejected claim 30, and Sakamoto further discloses the modifying operation comprises:

storing a write address of the first OSD data in a predetermined format that corresponds to the rotated position of the screen body ("the RAM 38 is a memory which can write/read upon occasion and which has a function to temporarily store input data ", column 8, line 40-42).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teach of Sakamoto into Register discloses a method of display dual mode image and Sakamoto discloses the generated image could be modified in order for it to be displayed in different mode.

50. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto as applied to claim 42 above, and further in view of Kishimoto et al. (5,134,390).

51. As per claim 44, Sakamoto demonstrated all the elements as disclosed in the rejected claim 42.

Sakamoto discloses an image on a rotatable display. It is noted that Sakamoto does not explicitly disclose reading first data corresponding to the OSD image in a predetermined manner to generate second data corresponding to the modified OSD image, however, this is known in the art as taught by Kishimoto. Kishimoto discloses a method of displaying image on a rotatable display in which "A readout circuit 78 reads at a predetermined timing, in accordance with a signal in the control signal group 900

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supplied from the main control unit 1, character data from the character bit map memory (BMM) 77, to thereby determine the display position for the character code on the display" (column 6, line 34-39).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teach of Kishimoto into Sakamoto because Sakamoto discloses a method of display dual mode image and Kishimoto discloses the generated image could be read in a predetermined order in order to easily determine a location to display.

52. Claims 54 and 64-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kishimoto et al. as applied to claim 52 above, and further in view of Register.

53. As per claim 54, Kishimoto demonstrated all the elements as disclosed in the rejected claim 53, and further discloses a screen (Figure 9a).

Kishimoto discloses a rotatable display with switches installed. It is noted that Kishimoto does not explicitly disclose "a rotatable screen body surrounding the screen having the one or more function keys installed thereon", however, this is known in the art as taught by Register. Register discloses a rotatable display with function keys surrounding the screen (Figure 1, items 34a and 34b).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kishimoto because Kishimoto discloses a rotatable display and Register discloses the function keys can be placed around the display screen in order for easy access.

54. As per claims 64-66, Kishimoto demonstrated all the elements as disclosed in the rejected claims 34, 39 and 40, supra, respectively.

Kishimoto discloses a rotatable display. It is noted that Kishimoto does not explicitly disclose that the first image is a control window, however, this is known in the art as taught by Register. Register discloses a rotatable display in which an image can be used for control input ("Different command text and/or graphics "C" is appropriately displayed in each of the command icons 54a", column 3, line 41-42).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kishimoto because Kishimoto discloses a rotatable display and Register discloses the displayed graphical icons in the window can be control input in order easily change the display setting.

Allowable Subject Matter

55. Claims 1-19 are allowed.

Response to Arguments

56. Applicant's arguments filed 5/2/2006 have been fully considered but they are not persuasive.

As per claims 20-30 and 32, Applicant alleges Register does not teach "displaying ... information about operation of the screen at a rotated position in accordance with the mode signal". In reply, Examiner considers Figures 4 and 5 display image according rotated state of the OSD and the alignment of 54a and 54b with "upright" icon orientations (column 3, line 42-43) indicate different modes of operation.

As per claim 33, since the orientation of the icons and the alignment of the icons changes in relation to the display orientation, one could tell the functional information from the changes.

As per claims 42 and 43, Examiner considers changing the layout of the display region (Figure 14, S24) after detecting signal satisfies the claimed limitations.

As per claims 34 and 39-41, Applicant alleges Kishimoto does not teach "displaying the first image that corresponds to the modified OSD data on the second image displayed on the rotatable screen". In reply, Examiner considers the character data is a first image including an on-screen display and is nevertheless an image. As for the argument that the two images do not overlap, the example figure (Figure 6) does not prevent the two images from not overlapping.

As per claims 35, 45 and 46, Applicant alleges Kishimoto does not disclose "a circuit unit to display the OSD image containing information about operation of the screen body". In reply, Examiner considers Kishimoto's is a display unit which inherently has circuit to perform the functions as claimed. The displayed portrait and landscape mode inherently tells the operation of the display.

As per claims 36-38, since there are no specific properties relating to an "OSD window", Examiner considers Kishimoto satisfies the claimed limitations.

Conclusion

57. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

58. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiries

59. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan R. Yang whose telephone number is (571) 272-7666. The examiner can normally be reached on M-F 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ryan Yang
Primary Examiner
June 2, 2006